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EXAMINER

LANG, AMY T

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/727,367
Filing Date: December 04, 2003
Appellant(s): CICHOCKI, FRANK RICHARD

Michael J. Mlotkowski
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02/12/2009 appealing from the Office action mailed 07/18/2008.

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The appeal brief is filed in the new format under the revised BPAI final rule before the effective date of the BPAI final rule. The Office published the BPAI final rule to amend the rules governing practice before the BPAI in *ex parte* patent appeals. See *Rules of Practice Before the Board of Patent Appeals and Interferences in Ex Parte Appeals; Final Rule*, 73 FR 32938 (June 10, 2008), 1332 *Off. Gaz. Pat. Office* 47 (July 1, 2008). However, the effective date for the BPAI final rule has been delayed. See *Rules of Practice Before the Board of Patent Appeals and Interferences in Ex Parte Appeals; Delay of Effective and Applicability Dates*, 73 FR 74972 (December 10, 2008). In the notice published on November 20, 2008, the Office indicated that the Office will not hold an appeal brief as non-compliant solely for following the new format even though it is filed before the effective date. See *Clarification of the Effective Date Provision in the Final Rule for Ex Parte Appeals*, 73 FR 70282 (November 20, 2008). Since the appeal brief is otherwise acceptable, the Office has accepted the appeal brief filed by appellant.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The statement of the status of claims contained in the brief is correct.

(8) Evidence Relied Upon

4,159,720	BURTON	7-1979
3,474,703	DAVIS ET AL.	5-1966

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. **Claims 1, 4, and 6** are rejected under 35 U.S.C. 102(b) as being anticipated by Burton (US 4,159,720).

With regard to **claim 1**, Burton discloses a braided suture having proximal and distal ends (see entire document). As shown in Figure 14, the suture comprises a hollow inner passageway coaxial with the braided suture (column 4, lines 46-49). A prescribed fluid runs through this passageway to facilitate healing of the damaged tissue (column 2, lines 13-18).

The hollow inner passageway comprises holes (102) that connect the inner passageway to the outer surface of the suture tube (column 4, lines 46-49; Figure 14). Each hole (102) comprises an outer opening along the outer surface of the suture and an aperture that connects to the outer opening and penetrates into the hollow inner passageway. Therefore, it is the examiner's position that the each outer opening of 102 overlaps the instantly claimed interstices and the each aperture of 102 overlaps the instantly claimed openings.

However, Burton does not specifically disclose wherein the distal end of the passageway is disposed between the proximal and distal ends of the braided suture. If this were not the case, then the distal end of the passageway would be open, allowing the fluid to directly flow into the passageway. However, Burton teaches that the ends of

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the suture absorb the fluid (column 5, lines 6-8). Therefore, since the fluid is absorbed, suture material must be present at the distal end to take in the fluid.

With regard to **claim 4**, it is the examiner's position that the inner passageway is a lumen of a tube.

With regard to **claim 6**, the apertures of 102 overlap the instantly claimed holes that connect the lumen (inner passageway) to the outer surface of the tube (outer surface of suture).

Claim Rejections - 35 USC § 103

2. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Burton (US 4,159,720) in view of Davis et al. (US 3,474,703).

Burton, as disclosed in paragraph 2 above and incorporated here by reference, discloses a suture comprising an inner lumen and a plurality of interstices along the outer surface. Burton further discloses wherein the suture is a wick and utilizes capillary action to move liquid along its length (Column 4, lines 21-45). However, Burton does not specifically disclose the suture as comprising a tube within the inner lumen.

Davis et al. (hereinafter Davis) also discloses a braided wick for transmitting fluids (column 1, lines 14-22). The wick advantageously comprises a hollow inner braid within an outer braid where the inner braid comprises openings between the braided filaments (column 3, lines 26-28, 44-45, 68-74). This provides an efficient method of transporting the fluid along the length of the wick through capillary action (column 3, lines 25-45). Davis teaches the flow of fluids is not restricted in either an axial or radial

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direction when utilizing a hollow inner tube (column 3, lines 35-36). Therefore, in view of this advantage, it would have been obvious at the time of the invention for the suture/wick of Burton to comprise an inner tube within the inner lumen as disclosed by Davis.

Although Davis does not specifically disclose the ratio of the outer diameter of the inner tube to the inner diameter of the tube, it would have been obvious to one of ordinary skill at the time of the invention for Davis to also comprise a tube diameter ratio of greater than 1.7, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (CCPA 1955).

(10) Response to Argument

IX. ARGUMENT

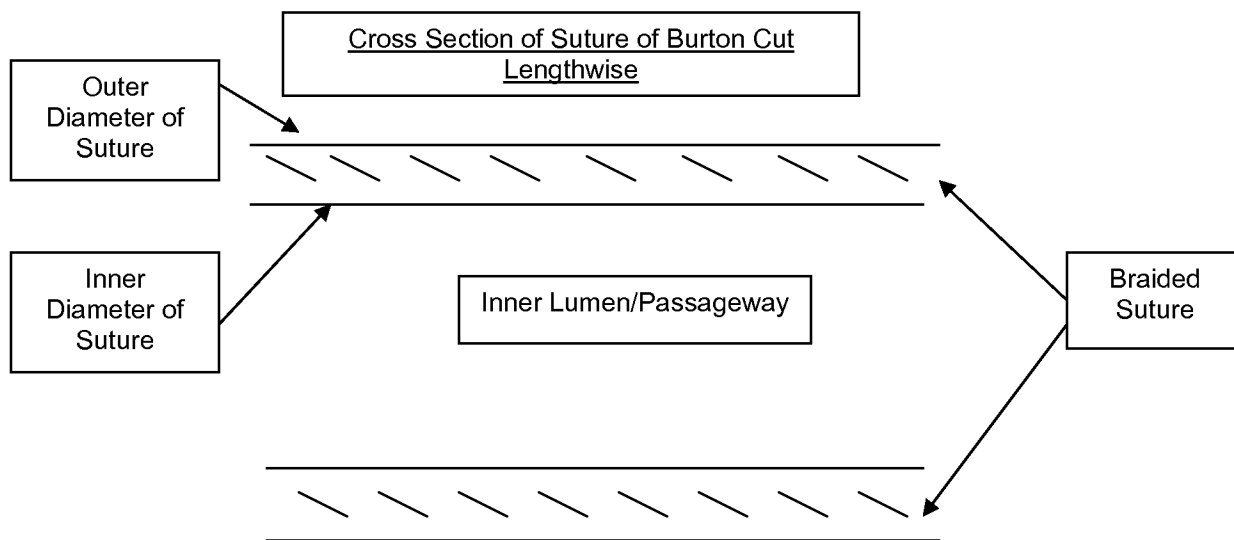
The rejection of claims 1, 4, and 6 under U.S.C. § 102(b), as being anticipated by Burton (U.S. Patent No. 4,159,720), should be REVERSED.

Specifically, applicant argues (A) that Burton does not describe the use of both the braided suture and the hollow monofilament in the same assembly.

With respect to argument (A), independent claim 1 recites a braided suture comprising "at least one passageway coaxial with at least a portion of the braided suture," and not a hollow monofilament separate from the braided suture. As shown in Figure 14 of Burton and below, Burton discloses a suture comprising an inner lumen. The outer diameter of the suture forms the braided suture and the inner diameter of the

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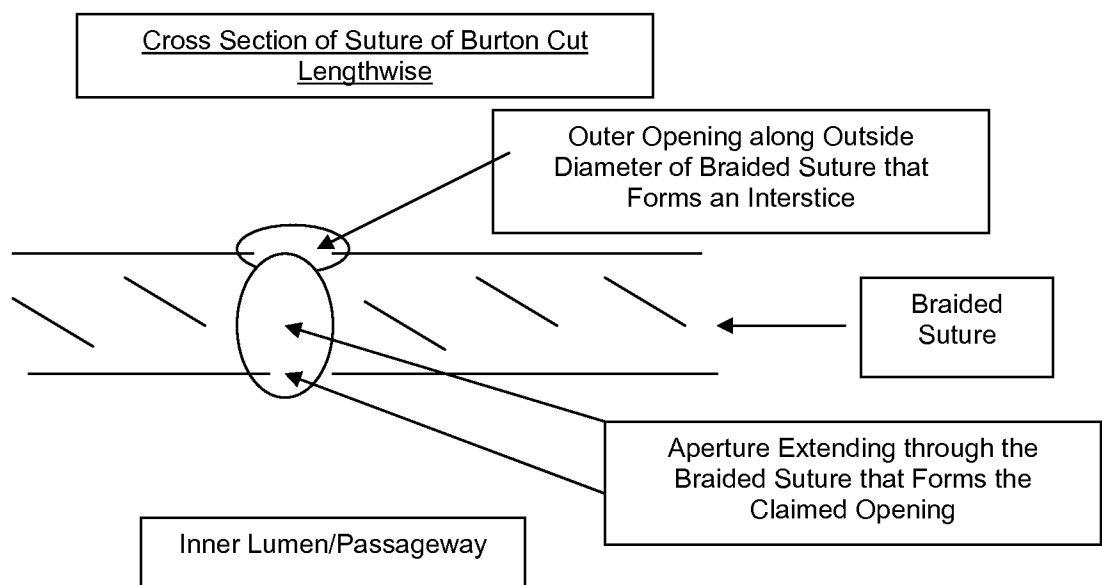
suture forms the lumen. This lumen overlaps the instantly claimed passageway since it is coaxial with the suture, has proximal and distal ends, and has a diameter that is less than the outer diameter of the braided suture (see lines 5-7 of claim 1). Therefore, the passageway can be a component of the suture since the instant claims do not require the passageway to be a separate component inserted into the braided suture. The Examiner also notes that the claimed "passageway" is not the same as the claimed "tube" in claim 2 where Davis was used to show obviousness for a tube. A passageway is simply a lumen or corridor, whereas a tube is a hollow body and therefore is a separate component.



Additionally, as shown in Figure 14 of Burton and below, the suture of Burton meets the additional claim requirements. Claim 1 recites wherein the outer suture comprises interstices and the passageway comprises openings for fluid to flow through. Burton discloses perforations (102) throughout the braided suture (column 4, lines 46-49). As described in the Final Rejection mailed 07/18/2008, the very outer opening

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formed along the outer plane of the braided suture overlaps the instantly claimed interstice. Each perforation also forms an aperture that extends through the braided suture and into the inner lumen/passageway. This aperture overlaps the instantly claimed opening. In the figure shown below, one interstice is shown with a circle and the opening formed through the braided suture and into the inner lumen/passageway is shown with another circle. Burton teaches many perforations (102) so that many interstices and openings would be formed.

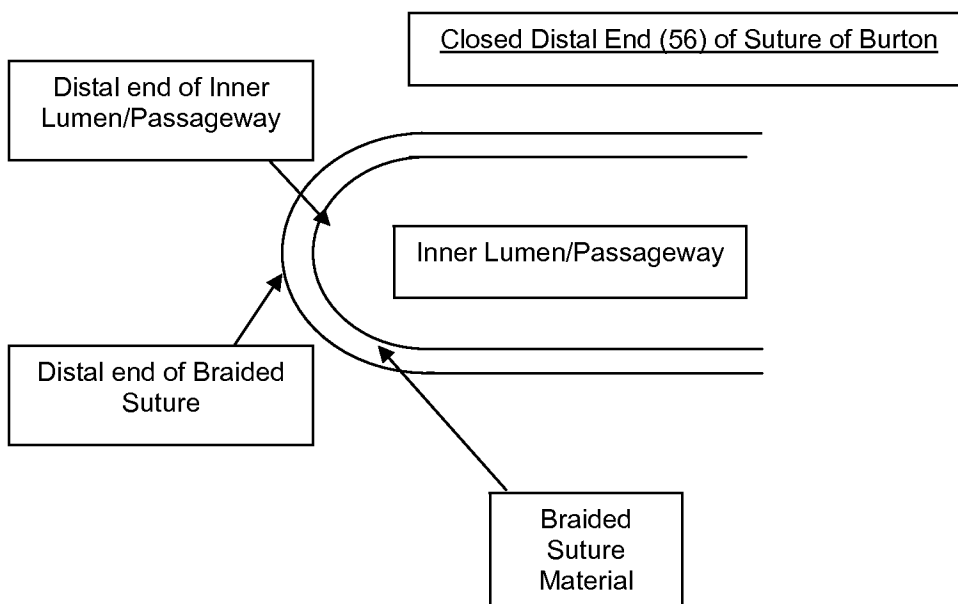


Specifically, applicant argues (B) that the sutures of Burton need not have material at their distal end to absorb fluid.

With respect to argument (B), Burton teaches that the ends of the suture absorb the fluid through by absorption or capillary action (column 5, lines 6-8). Therefore some material must at least be present to absorb the fluid. Additionally, the distal end of the

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wick comprises enlarged end (56) (Figure 9). As shown in Figure 9, the enlarged distal ends (56) form a circular end so that suture material is present at the distal end. Burton even teaches that these ends are saturated with fluid so that the fluid can be absorbed and flow along the suture (column 5, lines 26-30). Therefore, again, suture material is present at the distal end of the suture to form a closed end and absorb fluid. As shown below, this closed end allows the inner lumen/passageway to be disposed between the proximal and distal ends of the braided suture. Since the inner lumen is formed by the inner diameter of the suture of Burton, the inner lumen ends proximal of the suture material and therefore proximal of the claimed braided suture.



The rejection of claim 2 under 35 U.S.C. § 103(a), as being anticipated over Burton (U.S. Patent No. 4,159,720) in view of Davis et al. (U.S. Patent No. 3,474,703), should be REVERSED.

Specifically, applicant argues (C) that Davis is silent with respect to the relationship or advantages of the ratio of diameters of the outer braid and the inner

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braid, which is not a mere design choice and criticality for the ratio is disclosed in the specification at pages 16 and 21.

With respect to argument (C), however, the criticality is not commensurate in scope with the claims and therefore is not found persuasive. Case law holds that evidence is insufficient to rebut a prima facie case if not commensurate in scope with the claimed invention. *In re Grasselli*, 713 F.2d 731, 741, 218 USPQ 769, 777 (Fed. Cir. 1983). Case law holds that whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the “objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support.” In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range (i.e., scope). *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980), MPEP 716.02(d). Case law holds that evidence of superior properties in one species insufficient to establish the nonobviousness of a subgenus containing hundreds of compounds). *In re Greenfield*, 571 F.2d 1185, 1189, 197 USPQ 227, 230 (CCPA 1978).

In the instant case, the criticality in the specification is not commensurate with the claimed invention since the specification cites criticality for the ratio of diameters only when utilizing specific materials, polypropylene, polyethylene, or polytetrafluoroethylene only (see page 21, lines 10-27). The instant claim 2 does not recite any material when using the ratio of diameters. Additionally, the instant specification also cites a specific Youngs Moduli, 0.1-3 GPA, and specific outer diameters, .005-.010”, in relation to the ratio of diameters. The claims also fail to recite a Youngs Moduli or specific outer

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diameters. Therefore, the specification would only potentially provide criticality for the narrowly described suture comprised of specific materials and having a specific Youngs Moduli, outer diameter, and ratio of diameters. The specification does not provide support for the broadly claimed suture that only describes a ratio of diameters.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Amy T Lang/
Examiner, Art Unit 3731

Conferees:

/Anhtuan T. Nguyen/
Supervisory Patent Examiner, Art Unit 3731

/Janet C. Baxter/
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